IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by strikethrough and underlining. This listing also reflects any cancellation and/or addition of claims.

Claims 1-91 (cancelled)

Claim 92 (original)

A nanowire-based device, which comprises:

an electrically conductive layer;

an organic layer positioned on the electrically conductive layer, the organic layer being formed of a plurality of organic molecules each including a plurality of conjugated π-bonds; and

a nanowire positioned on the organic layer.

Claim 93 (original)

The nanowire-based device of claim 92, wherein the electrically conductive layer includes a metal.

Claim 94 (original)

The nanowire-based device of claim 93, wherein the metal is gold.

Claim 95 (original)

The nanowire-based device of claim 92, wherein each of the plurality of organic molecules further includes an anchoring group having an affinity for the electrically conductive layer and a polar group having an affinity for the nanowire.

Claim 96 (original)

The nanowire-based device of claim 95, wherein the polar group is electrically charged.

Claim 97 (original)

The nanowire-based device of claim 95, wherein the polar group includes at least one of a nitrogen atom and an oxygen atom.

Claim 98 (original)

The nanowire-based device of claim 95, wherein at least one of the plurality of organic molecules is a substituted heteroarene.

Claim 99 (original)

The nanowire-based device of claim 98, wherein the substituted heteroarene is selected from the group consisting of 4-mercaptopyridine, 2-mercaptoimidazole, and 2-mercaptopyrimidine.

Claim 100 (original)

The nanowire-based device of claim 92, wherein the organic layer is elongated, and the nanowire is positioned on the organic layer to be substantially aligned with the organic layer.

Claim 101 (original)

The nanowire-based device of claim 92, wherein the organic layer includes a pair of domains that are spaced apart from one another, and the nanowire is positioned on the organic layer to couple the pair of domains.

Claim 102 (original)

A nanowire-based device, which comprises:

a substrate;

a pair of electrical contacts formed on the substrate, the pair of electrical contacts being spaced apart from one another;

a first plurality of organic molecules deposited on the pair of electrical contacts, the first plurality of organic molecules being electrically conductive and each including a polar group; and

a first nanowire deposited on the first plurality of organic molecules to electrically couple the pair of electrical contacts.

Claim 103 (original)

The nanowire-based device of claim 102, wherein the pair of electrical contacts includes at least one of a metal and a metal oxide.

Claim 104 (original)

The nanowire-based device of claim 102, wherein the polar group has an electrostatic affinity for the first nanowire.

Claim 105 (original)

The nanowire-based device of claim 102, wherein each of the first plurality of organic molecules further includes a plurality of conjugated π-bonds.

Claim 106 (original)

The nanowire-based device of claim 102, which further comprises:

a second plurality of organic molecules deposited on the substrate between the pair of electrical contacts, the second plurality of organic molecules each including a non-polar group.

Claim 107 (original)

The nanowire-based device of claim 106, wherein the non-polar group substantially lacks an electrostatic affinity for the first nanowire.

Claim 108 (currently amended)

The nanowire-based device of claim 102, wherein the first plurality of organic molecules are deposited to form a first domain that is positioned on a first one of the pair of electrical contacts and a second domain that is positioned on a second one of the pair of electrical contacts, and the first nanowire is deposited to bridge the first domain and the second domain~~which further comprises:~~

~~a second nanowire deposited on the first plurality of organic molecules to electrically couple the pair of electrical contacts~~.

Claim 109 (new)

The nanowire-based device of claim 108, wherein the first plurality of organic molecules are further deposited to form a third domain that is positioned on the first one of the pair of electrical contacts and a fourth domain that is positioned on the second one of the pair of electrical contacts, and the nanowire-based device further comprises:

a second nanowire deposited to bridge the third domain and the fourth domain.